minnesota department of health
717 s.e. delaware st. minneapolis 55440
612 296 5221

June 18, 1981

Mr. Richard Koppy
Director of Public Works
City of St. Louis Park
5005 Minnetonka Boulevard
St. Louis Park, Minnesota 55416

Dear Mr. Koppy:

As Mike Convery discussed with you in your phone conversation of June 9, 1981, the Department of Health believes it is important that the City of St. Louis Park develop a formal contingency or emergency plan to handle water supply shortages and general supply emergencies. This plan is particularly useful since the City is faced with a very significant reduction of supply capacity due to the removal from service of five Prairie du Chien-Jordan wells, approximately 35% of the total capacity. The elements of a contingency plan are outlined in some detail below. These elements include an assessment of the supply problems, identification and review of alternatives for emergency supply, a review of the process for returning PAH-contaminated wells to temporary service, and a notification program. As you have advised us in the past, some of these elements have already been completed and implemented. One package that includes all these pieces of information would be useful as an informational tool and would also better document the thought processes and activities in implementing various elements of the plan.

Prior to complete development of a contingency plan, the City may be faced with a water supply emergency which may result in PAH-contaminated wells being returned to temporary service. The protocol for returning these wells to service is outlined in the second half of this letter.

Assessment of Needs and Development of Contingency Plan

In order to handle general water supply emergencies and to evaluate and document the need to return PAH-contaminated municipal wells to temporary service, the City of St. Louis Park should prepare a detailed assessment of its water supply needs and develop a contingency plan to meet those needs, if such a plan has not already been prepared. The assessment and plan should include, but not be limited to, the following components:

Water Conservation

1. Identify and review water conservation practices for residential and industrial users for various degrees of water supply emergency. Assess the City's water supply needs and determine means of fulfilling these needs for various degrees of supply emergency.

2. Develop a program of implementing water conservation alternatives for various types of supply emergencies. Some alternatives include sprinkling bans, reductions to industrial users, percent reduction of all users, etc.

3. Develop an enforcement plan to ensure compliance with conservation programs. Identify specific measures to implement this enforcement plan.

Alternative Water Supplies

1. Identify alternative emergency sources for water supply (i.e., adjacent communities, trucking water, PAH-contaminated wells, PAH-contaminated wells with treatment) and assess the advantages/disadvantages, feasibility, and reliability of such sources.

2. Develop a program for incorporating viable emergency water supply alternatives into the water supply program of St. Louis Park.

Plan to Return Wells to Service

1. If returning PAH-contaminated wells to temporary service is part of a contingency plan, identify the threshold of need to return PAH-contaminated wells to temporary service. For example, if water elevations in a storage tank are the critical factor, specifically, what water level must be maintained? How are water levels recorded and are these records currently kept?

2. Describe the decision-making process in the determination that an acute water supply shortage exists and that the PAH-contaminated wells need to be returned to temporary service.

3. Develop a protocol for the sampling and analyses of PAH-contaminated wells, in consultation with the Department of Health.

4. Identify wells that may be returned to service, and the sequence in which these wells are to be returned to temporary service.

Notification

1. Develop a public information program to notify the users of the St. Louis Park system that the City has prepared an assessment of its needs and a contingency plan, which may include returning certain of the municipal wells to temporary service which have been contaminated with PAH's.

2. Develop a program to notify the users of the St. Louis Park system when elements of the contingency plan are implemented, particularly if PAH-contaminated wells are returned to temporary service. If such advance notice is not possible under the circumstances, the program should provide for public notice as soon as possible after the City has actually returned the well(s) to service.

3. Develop a mechanism for notifying the Department of Health prior to return of PAH-contaminated wells to temporary service.

Please provide us with a copy of your written assessment and contingency plan as soon as it is drafted. We would appreciate being advised as to the length of time required to prepare the assessment and plan.

Conditions for the Return of PAH-Contaminated Wells to Temporary Service This Summer

As the summer period of high water demand is approached, the City of St. Louis Park may be faced with need to satisfy peak demands by returning to temporary service certain of the municipal wells which have been contaminated with polynuclear aromatic hydrocarbon (PAH) compounds. Augmenting the current supply during peak demands may be necessary to provide minimum system pressure for fire protection and to prevent backflow and back-siphonage problems, which present acute safety and health problems. If the summer is extremely dry, this situation may develop despite a stringent sprinkling ban and other conservation programs.

If, despite the best efforts of the City, the system pressure is reduced to dangerous levels or an extreme emergency develops this summer and the City has not yet completed its assessment and contingency plan, the City should reactivate PAH-contaminated wells, only under the following conditions:

1. The return of PAH-contaminated wells to temporary service should be the last resort, after the enforcement of water conservation practices and the consideration of alternative water supplies. Wells Nos. 4, 7, and 9 should be activated only in extreme circumstances after it has been determined that non-contaminated wells cannot meet demand or if the local system pressure can only be maintained by activating a PAH-contaminated well. Wells Nos. 10 and 15 should not be activated under any circumstances.

2. The Department of Health should be advised prior to return of the PAH-contaminated wells to temporary service.

3. The sequence for returning PAH-contaminated wells to temporary service should be Nos. 4 and then 7/9, unless water quality monitoring indicates otherwise.

4. Any PAH-contaminated well returned to temporary service should be sampled and analyzed, at City expense, prior to return to service, at time of return to service, after pumping one million gallons and after each million gallons pumped thereafter. The analyses should be done at a private lab selected

in consultation with the Department of Health. Samples should be analyzed for PAH compounds. The results of the analyses should be reported to the Department of Health as soon as possible. The volumes of water pumped daily from each well should be recorded.

5. The users of the City's system should be notified once the City anticipates returning a PAH-contaminated well to temporary service. If such advance notice is not possible under the circumstances, the public should be notified as soon as possible after the City has actually returned a well to service.

Please feel free to contact me at 296-5330 or Michael Convery at 296-5297, if you wish to discuss any of the matters mentioned in this letter. Thank you for your continued cooperation.

Yours very truly,

Gary L. Englund, P.E., Chief
Section of Water Supply
and General Engineering

cc: Lovell Richie, MPCA

Emergency or Contingency Water Supply Plan
For St. Louis Park, Minnesota

1. Water Conservation:

In 1980, May 19th, the City Council passed ordinance #1464 restricting water use for property owners having odd & even numbers to water on odd or even numbered days and of a complete watering ban between the hours of 3:00 PM to 9:00 PM daily. "See attached Ordinance."

2. Industrial Users:

Large industrial users of water have been urged to install water savers and recirculatory equipment. Many Industries have already done so, due to a large increase in the City's water and sewer rate structures implemented in January of 1981.

3. Enforcement Plan:

All City vehicles carry notices of the watering ban. To be given to residents violating the ban. Upon the second violation of the watering ban a service charge of $10.00 is assessed upon the resident for non-compliance. Further violations of the watering ban result in the turning off of the service to the resident.

Alternative Water Supplies

1. The possiblity of connecting to the Minneapolis water supply has been investigated in depth and found to be the least desirable alternative supply. An interconnection with Golden Valley is a distinct possibility as is a connection with the City of Minnetonka. Current studies are underway to also connect to the water supply of the City of Plymouth.

Orr-Schelen- Mayeron is doing this study under contract to the City.

Plan to Return Wells to Service

1. In a fire emergency the contaminated wells in the area of a large fire would be put on automatic and if needed to maintain pressure would come on line. The lowest elevation of water levels in our elevated tanks that could be tolerated before the need to turn on our contaminated wells would be 20 feet of water remaining in a 50 foot tank. At this point the wells would have to be put in service. The water levels for these elevated tanks are recorded on 30 day strip charts on the Master Control Panels and are kept for about three years.
2. The decision to return P.A.H. contaminated wells to service is not taken lightly, and only if and when the tank levels drop to an alarming degree during a hot dry day, or a fire emergency exists, would they be put into service, and then only until pressure was returned to a safe level and capacity of the system restored. The decision would be made by the Water Supt.

3. Serco Labs will do all testing for P.A.H.'s during any emergency running of the wells. A sample would be taken 30 minutes after start up of each contaminated well and a second sample taken just prior to shut down, or 1 time each 24 hours running time. The Minnesota Board of Health would have split samples if desired, and would be expected to share 50% of the costs of

4. Well #4 would possibly be the first well returned to service as it is in an area of high usage and normally low pressure on a high usage day. This well is capable of pumping only 600 to 700 gallons per minute or about 1 million gallons if it were needed to run a 24 hour period, which is quite unlikely.

Well #7 & 9 which show almost no P.A.H.'s would be the next choice, contrary to the statement of a total ban on well #15 I believe it would be our next choice to put in service as the powdered carbon treatment was found to remove 97- 98% of the P.A.H.'s and this well is set up with the injection equipment and carbon ready to operate.

Well # 10. I would not consider using it it as it has no treatment facilities and is also a sand pumper.

Notification

1. The City of St. Louis Park uses the Sun Newspapers as its official publisher. As in the past the paper is more than willing to publish items of public interest upon request of City officials. As in 1980 on July 9th notification of our water supply problems and as to the possible use of the contaminated wells was published. The broadcasting stations also are aware of our problems and have broadcast free public information messages to the Public for the City.

2. Broadcasting stations and News sources could be contacted within a few hours of implementation of plans to use the contaminated wells, or notification could be mailed out by U.S. Mail within a few days.

3. The Superintendent of the Water Department has in the past and will continue to do so in the future, immediately notify the Minnesota Board of Health whenever it is deemed necessary to return any of the contaminated wells to temporary production.

Vern Tollefsrud
Water Superintendent

PRESS RELEASE

CITY OF ST. LOUIS PARK

The following order on water restrictions has been issued by the City Manager and all news agencies are requested to give this order as much public coverage as is possible:

Inspection of water records, usage, and the current capacity of the water system indicates there is a reduction of capacity in the City water system which constitutes an immediate threat to the ability of the system to meet the demands placed upon it by the users.

Therefore, the following restrictions are hereby imposed upon the use of city water within the City of St. Louis Park: Property owners having even numbered addresses may sprinkle or water their lawns only on even numbered days, and property owners having odd numbered addresses may sprinkle or water their lawns only on odd numbered days; however, all property owners are prohibited from watering or sprinkling their lawns between the hours of 3:00 p.m. and 9:00 p.m.

Property owners in violation of the sprinkling restrictions are subject to a service charge of $10 for each instance of non-compliance.

This order constitutes a certification and finding as provided for in the City Code, Section 9-113, Ordinance 1464, and shall remain in full force and effect until rescinded by the City Manager.

Information concerning water restrictions in St. Louis Park can be obtained by calling 920-3000, asking for the Water Department. For additional information concerning this news release, please ask for the City Manager's Office.

002842

July 9, 1980

May 6, 1980

NEWS RELEASE

Sprinkling restrictions have been imposed in the City of St. Louis Park effective May 6, 1980. These restrictions, which apply to all City property owners, have been instituted to avoid the threat of a water shortage. These restrictions are in effect until lifted by the City.

While the sprinkling restrictions are in effect, property owners having even-numbered addresses may water their lawns on even-numbered days. Property owners having odd-numbered addresses may water their lawns on odd-numbered days.

All property owners are prohibited from watering their lawns in between the hours of 3 p.m. and 9 p.m., when the greatest demand for water occurs.

Property owners found in violation of the sprinkling restrictions are subject to a service charge of $10 for each instance of noncompliance. The service charge will be added to the property owner's water bill.

Anyone having questions regarding the sprinkling restrictions can contact City Hall at 920-3000, extension 37, for further information.

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002843

ORDINANCE NO. _____

AN EMERGENCY ORDINANCE AUTHORIZING THE ACTING CITY MANAGER TO IMPOSE RESTRICTIONS ON WATER USE

THE CITY COUNCIL OF ST. LOUIS PARK DOES ORDAIN:

Sec. 1. The City Council hereby declares that the emergency hereinafter defined exists and that an emergency ordinance is necessary for the immediate preservation of the public peace, health, morals, safety or welfare in accordance with Sections 3.05, 3.06 and 3.08 of the Charter of the City of St. Louis Park.

Sec. 2. The City Council hereby finds and determines that the City's water system is experiencing a capacity problem that will lead to a water shortage in the absence of appropriate water-use restrictions.

Sec. 3. The Acting City Manager is hereby authorized to impose a restriction on the use of water for lawn sprinkling and irrigation. Failure to comply with the conditions of this emergency ordinance will result in a service charge which will be added to the water bill of the property. The service charge for noncompliance to restrictions on water use shall be fixed by the Acting City Manager.

Sec. 4. This ordinance shall take effect immediately upon its passage, without publication, on the date hereof.

Adopted by the City Council May 5, 1980.

_____
Mayor

Attest:

_____
City Clerk

Reviewed for administration:

_____
Acting City Manager

Approved as to form and legality:

_____
City Attorney

Sec. 2. This ordinance shall take effect 15 days after publication.

Adopted by the City Council May 19, 1980.

_____
Mayor

Attest:

_____
City Clerk

Reviewed for administration:

_____
Acting City Manager

Approved as to form and legality:

_____
City Attorney

002845

WATER USE RESTRICTIONS

On May 5, 1980, the City Council enacted an ordinance restricting water use during the high summer demand period of May, June, July and August. The restrictions, which apply to all City properties, have been instituted to avoid a water shortage or low water pressure. The restrictions are in effect until lifted by the City. Due to the abnormally dry spring season, the water usage restrictions are important to protect the integrity of the water supply system for the City of St. Louis Park. Many other cities are experiencing water shortages this year and have enacted their own sprinkling bans. Publicity on the sprinkling restrictions will continue to be broadcast through the newspapers, on the radio stations, and on the television newscasts.

While the sprinkling restrictions are in effect, property owners having even-numbered addresse may water their lawns on even numbered days. Property owners having odd-numbered addresses may water their lawns on odd-numbered days. The high demand period during the typical day for water use is between the hours of 3 p.m. and 9 p.m. All property owners are prohibited from watering their lawns during this period. Those found in violation of the sprinkling restrictions as contained in Section 9-109.1 of the City Code are subject to a service charge of $10 for each instance of non-compliance. The service charge will be added to the property owner's quarterly water bill.

The most important element of the sprinkling ban is that of a total sprinkling prohibition between the hours of 3 p.m. and 9 p.m. Experience has indicated that between these hours in a typical day the highest domestic water usage rate occurs. Evidently, people are preparing for their biggest meal of the day, watering their yards, taking showers or baths, and an assortment of other tasks. As a result, the water system is heavily taxed during this period. By eliminating all outside lawn sprinkling the water system can provide the more important water for human consumption without depleting its resources to a critical level. Later, at night, or in the morning, when the water resources are restored, it is more feasible to allow lawn sprinkling and other outside water uses.

If there were no sprinkling restrictions in the City, serious repercussions to all property owners could result. The first signal of a serious problem would be a reduction in water pressure. The normal property in St. Louis Park is serviced by a water line with approximately 62 pounds per square inch of water force. As the water resources are depleted, this pressure will drop, causing inconveniences for the water consumers. Additionally, those businesses that depend upon the pressures of the water system for their products may have to close temporarily. Most important is the danger of a lack of fire protection. With low pressure in the water system a fire could easily get totally out of control, resulting in a loss of property and income.

WATER USE RESTRICTIONS - HISTORICAL

During the 1950's sprinkling bans in St. Louis Park were utilized quite often. The water system for the City could not keep up with the rapid development in the residential districts and, as a result, water service during the summer months could not keep up with the high demand. In 1963, the City installed a modern water system control panel in City Hall to electronically control the operation of the water pumping stations. Since the activation of the water control panel, no sprinkling bans have been utilized. The City water system is fully completed and able to accommodate a full demand from the City's population under normal circumstances.

1980 WATER SHORTAGE CAUSES

The sprinkling restrictions that are in effect in 1980 have been caused by additional factors outside of the capability of the water supply system to meet the high demand periods. Currently, five of the City's 14 drinking water wells are closed due to a contamination problem. Republic Creosote Company, which was located at Walker Street and Louisiana Avenue

for approximately 55 years, treated wood products with creosote. Over a long period of time the creosote seeped into the ground and contaminated the ground water near the industrial site. Later, the ground water contamination extended into the underground water bearing stratas (aquifers) from which the City obtains its drinking water. The wells that have been closed were found to have a higher than normal presence of polynuclear aromatic hydrocarbon (PAH) compounds. PAH compounds refer to a broad group of chemicals (carcinogens) which have an unknown effect on humans; however, when applied to animal tissue in a sufficiently high dose, have been found to cause cancer. In order to avert a potential health risk, the contaminated wells were shut down.

While it is important not to underestimate the implications of the detected contaminants, the Minnesota Department of Health notes that PAH compounds are contained in the diets of most Americans through consumption of food such as coffee, barbequed meats and smoked foods. Currently, the MDH is testing the City's drinking water wells on a monthly basis to determine if the contamination is spreading and whether any further wells should be closed. The water that is delivered to the homes of the City residents is considered completely safe.

Several major studies are either under way or just being completed on the water quality problems. One study is that being conducted by the United States Geological Survey (USGS) scheduled for completion by the fall of 1980. The study is a two-part program consisting of Phase I, a detailed geological and hydrological study of the contamination area within St. Louis Park. This will be followed in Phase II by the development of a computer-simulation model of all the existing conditions. The model will be used to evaluate the alternatives available to remedy the problem.

A second study beginning in July of 1980 will be performed by a group of engineering firms from around the United States. They will utilize the information gathered from the geological and hydrological studies performed by the USGS and prepare engineering plans to eliminate the chemical contamination of the ground water system. Their work should be completed by the summer of 1981 at which time the implementation of the plans can begin. Funding for the two studies has come from State Legislature appropriations totalling nearly $400,000.

The City is also studying methods to regain the lost capacity of the closed water wells. The most promising plan at present is the implementation of a carbon adsorption treatment process at one or more of the City's wells. This process could provide for the effective removal of the PAH compounds from the water prior to distribution to the consumers. It would enable the City to open some of the wells that have previously been closed.

ENFORCEMENT OF THE SPRINKLING BAN

During the next few weeks the City will continue with the enforcement of the sprinkling restrictions. The document you have just finished reading is an informational item on the water restrictions and why they are necessary. Any property owner that is found watering his or her lawn illegally will be given, as the first step, a copy of this informational document on sprinkling restrictions. Any questions on the sprinkling restrictions should be directed to the Public Works Division at 920-3000.

After a property owner has received notification of the sprinkling ban through the informational document, it is expected the requirements of the ban will be followed. If the property owner is found sprinkling during the restricted hours, a second time, he/she will be given an official warning letter. It indicates that one more occurrence will result in a service charge being levied against the property. After the third witnessed occurrence of lawn sprinkling, the City will present the property owner a letter which indicates a $10 service charge will be placed on the property owner's water bill. Continued disregard for the sprinkling restrictions will result in additional service charges and could cause the City to discontinue service to the property.

In order to enable the City of St. Louis Park to provide water for its residents during the dry weather season, it is important that they all abide by the sprinkling restrictions. With slight alterations to the residents' schedules, little inconvenience will be encountered, and